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ABSTRACT

In order to help orient Indian students to the facilities and opportunities available at an institution of higher learning, the following program was developed at the University of Western Ontario. First, letters were circulated to departmental chairmen and faculty members asking them to write a papagraph describing each summer job that could be done by a bright grade 12 or 13 student (the department would pay part or all of the student's wages or an attempt would be made to find the money elsewhere). One the number of jobs was ascertained, letters were sent to Indian Affairs counsellors who were to recruit Indian students having plans to attend a university or community college in the fall. Initially, the students were asked to indicate their main interest and departmental preference at the university. After sufficient positions had been committed, a list of job descriptions along with an interview application was mailed to the students. Students selected to take part in the project were notified to come to the university (travel fare and lodging were provided) where they were interviewed by professors representing the student's first and/or second departmental choice. All students were then placed. During the summers of 1969 and 1970, 27 students participated. Generally, students' reactions to the program have been positive. (LS)

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UNIVERSITY "HEADSTART" FOR INDIAN STUDENTS

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UNIVERSITY "HEADSTART" FOR INDIAN STUDENTS

Rationale

During the last few years great outcries have been heard from Canada's Native Peoples about the injustices done to them by the majority population. These spokesmen have advocated a transference of responsibility from the dominant society to the Indian people themselves. These leaders have also stressed adequate training and better educational opportunities for their young people.

The tendency over the years has been to direct the Native Peoples into the primary and unskilled occupations. Very few, if any, entered the professions. John Porter in his book "The Vertical Mosaic" illustrates this very clearly in his study of the ethnic origin and occupational classes of the male labor force (Table I).

Porter's rank order of occupational status places the Native Indian at the bottom of the order. Over a period of thirty years the degree of structural assimilation by the Native People had not shown any appreciable change in the upward mobility of the labour force.

Table II shows the educational level of the labour force of a reserve in South-western Ontario as compared with the national labour force. It points out that the reserve labour force is educationally ill equipped to compete on equal terms with the Canadian worker.

However, great strides are being made by the young native people to improve their academic and professional qualifications. In 1959 there were a total of 99 Indian students in all the universities in Canada. In 1968 there were 258 and in 1969 there were 298. However, this figure was [illegible] less than 1% of the total native population in Canada at that time.

TABLE 1

ETHNIC ORIGIN AND OCCUPATIONAL CLASSES, MALE LABOUR FORCE,

CANADA, 1931, 1951, AND 1961

PERCENTAGE OF OVER-PRESENTATION IN OCCUPATION BY ETHNIC GROUP

OCCUPATIONS	YEAR	BRITISH TOTAL	NATIVE POPULATION	TOTAL MALE LABOUR FORCE - %
PROFESSIONAL	1931	+ 1.6	- 4.5	4.8 %
AND	1951	+ 1.6	- 5.2	5.9
FINANCIAL	1961	+ 2.0	- 7.5	8.6
CLERICAL	1931	+ 1.5	- 3.7	3.8
	1951	+ 1.6	- 5.2	5.9
	1961	+ 1.3	- 5.9	6.9
PERSONAL	1931	- .3	- 3.1	3.5
SERVICE	1951	- .6 .3	- .6	3.4
	1961	- .9	+ 1.3	4.3
PRIMARY	1931	- 4.6	+45.3	17.7
AND	1951	- 2.2	+47.0	13.3
UNSKILLED	1961	- 2.3	+34.9	10.0
AGRICULTURE	1931	- 3.0	- 4.9	34.0
	1951	- 3.2	- 7.8	19.4
	1961	- 1.5	+ 6.9	12.2
ALL OTHERS	1931	+ 4.8	-29.1	36.2
	1951	+ 2.5	-28.2	52.1
	1961	+ 1.4	-29.5	58.0

TABLE II

MALE LABOUR FORCE

16 - 44 YR AGE GROUP

EDUCATIONAL LEVEL	CANADIAN*	RESERVE RESIDENT
ELEMENTARY ONLY	44 %	67 %
FULL HIGH SCHOOL OR PART	47 %	32 %
SOME POST HIGH SCHOOL	9 %	6 %

* FROM 1961 CENSUS.

The Indian student has not been entering post secondary institutions in sufficient numbers to make a worthwhile impression on the dominant society. Of the total staff of 5,395 persons employed by Indian Affairs in 1968, only 790 or 14.6% were native people. If the Indian is advocating the administration of his own affairs, adequately trained and educated native persons will have to be found.

To encourage the development of this native talent was the prime concern in the implementation of the summer work project at the University of Western Ontario. This program is designed to help bridge the gap between the high school and the university. The summer project could serve as an orientation to the facilities and opportunities available at an institution of higher learning. This experience we hope will help alleviate some of the "stereotyped fears" on the part of the student and replace them with a healthy interest in academic achievement.

History

The need had been generally recognized, but the seed for this particular program was planted when another member of the Physics Department at the University of Western Ontario showed me a paper in the March 1969 issue of The Physics Teacher. It was called "University Research Programs for Inner City High School Students", a program devised to encourage entry into the sciences by outsider-minority groups, which, in the Detroit area, mainly meant deprived urban Negroes. At our university, I had been struck by the fact that in my experience with freshman physics labs, I had seen hundreds of freshmen from Hong Kong before I saw my first Ontario Indian freshman, who, incidentally, graduated on Friday.

Exploration of possibilities began. The U.W.O. Senate had a Sub-committee on Ethnic Groups to whom I presented a basic proposal for a program. They said "Great! See what you can come up with." The scheme was to find some interesting jobs around the University that high school students could handle, find financing for them, and find the students.

That first summer (1969) we got a late start, but a trip to Ottawa assured us that the Department of Indian Affairs was sufficiently interested to provide the financial backing for a pilot project. Professors seemed enthusiastic, and responded with far more position offers than we could use. So we started with three students, and from that we expanded to 24 students in 1970 and 33 students this year.

The project is still carried on under the umbrella of the U.W.O. Senate Committee on Educational Relations through the Subcommittee on Ethnic Groups.

Operation

The description we shall give is of the methods we are using now, i.e. with the less-useful techniques of the past weeded out.

(a) Recruitment of Positions and Finances

Early in February a letter is circulated to departmental chairmen and many faculty members asking them (i) do they have any interesting jobs a bright Grade 12 or 13 student could do in the summer, and if so to send in a paragraph describing each; and (ii) are they able to contribute all or part of the student's wages from their sources, grant or departmental. It is made clear that if they have appealing jobs but no financing that we would try to find the money other ways.

For the first two summers the "other way" was the Department of Indian Affairs and Northern Development. This year, in addition to the Department of Indian Affairs, there is a grant from the university general funds for the program. Other sources of supplementary financing were tried: applications to charitable foundations and to the "Opportunities for Youth" program of the federal government were all unsuccessful.

(b) Recruitment of Students

Early in March an information kit regarding last year's summer project was mailed to all the Distric Superintendents of Education in Ontario. The kit included the Report made to the University Senate, copies of the London Free Press story, as well as a supply of application forms for this year.

It was the responsibility of the Indian Affairs counsellors in the various Districts to recruit students. Because of the nature of work to be done, and the evaluation of last uear's students, the project was limited to the Grade 12 and 13 students who had plans to attend a University or Community College in the fall. This initial application also asked the student to indicate his main interests and departmental preference, if any, at the University. This information was vital for it aided in the recruitment of positions at the university.

Once sufficient positions had been received, a list of job descriptions was compiled. This list, along with an Interview Application was mailed directly to the student. On this application the student was requested to list his choices for interviews. It also asked that he give his travel plans and to indicate whether he would require overnight accomodation.

Students participating in this program come from all regions of the province as shown in Figure 1. The various Distric offices were asked to provide their students' travel fare to London for the interviews; however, billeting was provided free in homes.

(c) Student Placement

The next problem is the one of matching students to positions. Our technique looks chaotic, the scene is bedlam, but we feel we achieve about the best possible in terms of getting students into positions that suit both them and the professors in the shortest space of time.

The students come in from all across the province on a pre-arranged day. The fact that they have previously indicated preferences to us has led to a last minute scramble on our part for extra positions in the areas that seem most popular. At 9:30 we bring them up to date on any new possibilities, place all position descriptions on separate sheets around the room, and have students sign the sheets for their first and second choices.

Hopefully, this is the point at which the professors arrive on the scene. Each is given the sheet with his position description on it, and he proceeds to interview the students who have signed his list. The prof then indicates his preference, the student is asked, and gradually they get paired up. Two hours saw a total of 28 students placed. There were, as one would expect, a few more complicated cases left over: two were placed after lunch, and three are to be finalized by mail.

Table III gives a statistical summary of our operation for 1969 and 1970, and of the proposed 1971 operation based on placements made and expected for this year.

Table IV gives a breakdown of students by department for this year.

TABLE III

STATISTICAL SUMMARY OF INDIAN STUDENT PROGRAM

	1969	1970	1971
No. POSITIONS OFFERED	20	28	35
No. STUDENTS PLACED	3	24	33
No. PROFS WITH STUDENTS	2	21	25
No. DEPTS WITH STUDENTS	2	14	15
WAGE TO STUDENTS, PER WEEK	$55	$55	$70
SUMMER TOTAL PER STUDENT	$330	$440	$560
SUPPORT MONEY:			
FROM UNIVERSITY SOURCES	0	$4,300	$8,600
DEPT. OF INDIAN AFFAIRS	990	6,700	10,000
TOTAL	990	11,000	18,600

TABLE IV

DEPARTMENTS INVOLVED IN INDIAN STUDENT PROGRAM

DEPARTMENT	NUMBER OF STUDENTS
ANTHROPOLOGY	2
ASTRONOMY	1
BACTERIOLOGY	1
BOTANY	6
BUSINESS	1
EDUCATION	5
GEOGRAPHY	2
GEOLOGY	1
PHARMACOLOGY	3
PHYSICAL EDUCATION	1
PHYSICS	1
POLITICAL SCIENCE	1
PSYCHOLOGY	1
SOCIOLOGY	6
ZOOLOGY	1

The student distribution is partly the result of student preference, partly the result of job availability. You will notice that among the missing are the Departments of English, History, Languages, Nursing, Law, Mathematics, Philosophy, etc. This indicates not so much a lack of interest in these areas on the part of either the professors or the students, but rather that it is difficult in these areas to come up with anything but the most mundane jobs that a high school student could usefully do. Putting students into make-work jobs in such cases would probably be counter-productive as far as the aims of the project are concerned.

The students are paid every two weeks by the University in the same fashion as other summer employees of the University. Since all these students are covered by their families' medical and hospitalization plans, they fill out exemption forms for these, and for income tax deductions. They are covered by the University's accident insurance policy, the same as other employees. We provide the Comptroller's office with a list of accounts supplying the money for each student, and they are billed accordingly. The London Branch of the Department of Indian Affairs gives the University a written statement of its financial commitment in advance of the program, and the University then bills them monthly.

(d) Housing and Extra-Curricular Activities

N'Amerind, the Indian Friendship Centre in London, was asked to find volunteer accomodation for the students when they came for their interviews. This they readily did. The Centre also assisted to a large extent in the securing of reasonable accomodation for the eight weeks of actual work.

The University residences were considered; however, the students found the rates prohibitive in view of their salaries. Using the resi-

dences would have had some definite advantages, for some of the students lived quite a distance away and had to depend on the city buses.

In many cases the student was included in the social functions within the department at the University. They were also encouraged to make use of the facilities at Western such as the library and the athletic and recreational facilities.

However the greatest social interaction came through the Indian Friendship Centre. N'Amerind afforded the students a neutral meeting place. It was from here that they organized trips to Niagara Falls, to ball games, to the beach and so on.

Evaluation

(a) Students

During the first two summers 27 students have participated in this project. The results so far have been most gratifying. The three students who were in the initial programme have all continued in their studies. Of the 24 in last year's program, 22 have continued their studies as follows:

4 entered university
7 entered community college
1 entered teachers college
9 returned to high school
1 entered business college
2 entered employment

Four of the students who participated last year returned this summer.

The general student reaction has been very good. All seemed to like the people they worked with; for some the job itself was exciting and/or interesting; for others it seemed less so, but the exposure was considered valuable. None actively disliked their job, and none withdrew from the project.

Each student was requested to give a written evaluation of the

program with their recommendations and personal likes and dislikes. Findings indicated that the greatest area of dissatisfaction was in the salary paid and in the housing. Their recommendations were given top priority and have been incorporated in our plans for this year.

It is probably impossible for the students to assess fully the value of the program at this point. However, one student seems to sum up her experience very nicely. To quote her:

"The greatest thing that I have learned this summer is that one need never fear about attending a university if there is an earnest desire to learn. I have often thought and been told that I would never be able to be successful in university because my academic standing is only average. But I have been told by professors and students alike that if one has a keen desire to learn then nothing should be able to stop him. I'm pretty sure that there are a lot of students in high school who would benefit next year by working in a university atmosphere. I hope this program is continued next year to enable those who are going to some other institution beyond high school, whether it be university or college, to experience the environment and therefore be better prepared both materially and mentally. The atmosphere at a university is different. And one must be prepared for it. What better way can there be to prepare oneself than by living and working within such an atmosphere. All students whether Indian or white fear new situations and need to be absolved from these fears. An Indian student in particular because he needs to remember that he represents the whole Indian race. What he accomplishes will either help or hinder his people. Therefore I believe this program, if continued, would help other students to decide to take advantage of the opportunities an

education can present. We all need encouragement once in a while and especially in your last years of high school, your next decision is for life. It's only fair that a person see for himself whether or not he would like to learn in such a new and different environment."

(b) Professors

After the 1970 program the participating professors' evaluations and recommendations were also requested. Sixteen responded, covering 20 of the 24 students involved.

In all cases they found the students capable of fulfilling the functions assigned. In two or three cases the students' interests did not correlate with the job, these same cases being the only ones reported where work was done perfunctorily rather than well. Otherwise the professors were enthusiastic about the students' performance.

In discussing the adjustment and outlook of the students and those working with them, most felt there had been positive achievements, but many commented on the difficulty of assessing these aspects, either because the specific students were already broad in outlook, or because the people they worked with were.

We were pleased to find that the professors' own aims in participating in the program were very much in keeping with those of the organizers of the project. Some of their comments are worth passing on:

(i) the hope that more Indian students would be directed into academic streams earlier in their high school careers

(ii) that the organizers pay more attention to off-work activities

(iii) that the pay be adequate, both to attract the good students, and to provide some competition for the places. In this case screening

would become more important.

To our delight, the professors were unanimous in their approbation and recommendation that the program continue.

Finally, we have had expressions of satisfaction from the two sponsoring bodies: the University of Western Ontario Senate, and the Department of Indian Affairs.

In conclusion, all hope the effects of this venture go beyond the students directly involved in it: that teachers and counsellors working with Indian students will learn of the program and its results, and hence have a greater appreciation of their own students' potential; that parents amd friends of the students will see the expanded alternatives open to them; and that other regions of Canada and the continent will be encouraged to embark on similar exercises in negative discrimination.

In the last analysis, success will have been achieved when we eliminate the need for our function.

Positions for Indian High School Students, Summer 1971
Available at the University of Western Ontario

The following is a list of positions with a brief description of the type of work involved. In each case the name of the faculty member in charge of the group is given and any further information you may wish could be obtained either from the faculty member or the undersigned.

No previous experience is expected or required for any of the positions; in each case the students will be instructed and will learn as they work with the group. In none of the positions is there any preference for boys or girls; choice should be made purely on the basis of aptitude and interest on the part of the student.

The positions are for eight weeks at $70.00 a week. The starting date is from June 28 to July 1, depending upon individual arrangements with the professor. For out-of-town students it is possible to obtain a room in residence at the University for $31.35 per week which includes the room full time, and three meals a day Monday through Friday, with cafeteria meals available Saturday and Sunday on a cash basis. Accommodation can also be found in private homes at around $25.00 per week.

Grade 12 and 13 students interested in the program are invited to meet together Friday, May 14, 1971 at 9.30 a.m. in the Physics Building, Room 137. Following this, the students will be able to go and talk to those professors whose positions interest them. Most, if not all, will be available that morning for interviews. Out of town students will be found overnight accommodation if necessary.

Shirley Andreae
Department of Botany
University of Western Ontario
London 72, Ontario

George Simons
Department of Indian Affairs
197 York Street
London, Ontario

Department of Botany

1. Dr. R. Greyson - a) Experimentation and analysis of ABPHYL and normal corn plants. This work will involve application of growth substances, gross and microscopic observation of leaves, shoot apices and reproductive structures.
b) Study of flowers of mutant tomato plants. This involves description, both gross and microscopic, of flowers as they develop and the carrying out of experiments designed to modify flower structure.

2. Dr. P. Cavers - Field Work: This will be at the Plant Sciences experimental farm for the most part. In general it would involve assisting graduate students in plant population studies, (counting numbers of plants, time of flowering, estimating seed production, etc.). There would also be some preparation of experimental sites, selective hand weeding of experimental plots and other jobs of preparation and maintenance.
Laboratory Work: This part of the job could include making measurements of leaf area, size of plant parts and dry weights of field grown plants. Also the preparation and running of germination tests will be done.

3. Dr. A. Wellman - Long term storage of biological material - growing micro-organisms and plant pollen and testing their survival after low temperature treatment.

4. Dr. D. Fahselt - Culturing of tachy-plants (plants with a short life cycle) for population experiments.

5. Dr. G. Abrami - Technical assistance in a germination research project - Germination tests are planned under different conditions of light and temperature for a study of rhythmic and fluctuating phenomena in Chenopodium botrys.

6. Dr. A. Maun - Field and laboratory studies on the biology and control of weeds.

Department of Bacteriology

7. Dr. J. Robinson - Effect of Bdello vibrio (a bacterium which parasitises other bacteria) on the bacterial population of polluted and normal river water.

Department of Geology

8. Dr. A. Dreimanis - Sample preparation (gravels, sands, clays) for laboratory analyses and some simple routine lab. analyses; also occasional participation in sample collecting in the London area.

Department of Physics

9. Dr. P.A. Forsyth - To assist with the construction and operation of radio research equipment in the Centre for Radio Science.

10. Dr. P.W. Whippey - To become familiar with microwave components and techniques and to build, under supervision, a microwave spectrometer.

Department of Zoology

11. Dr. R.J. Planck - The basal portion of most of the longspurs feathers are black. This is possibly an adaptation to allow utilization of solar energy to lower energy requirements of the diet. The function of these feathers can be studied by observing sunbathing behaviour of the birds at different temperatures and noting the following: body orientation to radiant energy source, food consumption, body weight and feather position manipulation.

Department of Geography

12. Dr. V.M. Sim and R.W. Parker - To assist in the observation and recording of field information on erosion and shore-line modification at the University's field station on Lake Erie, and to assist in the installation of field equipment.

13. Dr. V.W. Sim and R.W. Packer - To assist in the ordering, cataloguing and filming of maps in the Departmental Map Library.

Althouse College of Education

14. and 15. Dr. A. Blue - Microfilming and compiling bibliography on Canadian Indian Culture. Assisting

teachers in development of courses in Indian studies.

16. and 17.
Dr. J.E. Walsh

Computer operations - for a student with mathematical-mechanical mind. We require during the summer an operator who would be responsible for loading programs into the computer, pressing the appropriate buttons and helping students who are having difficulty with the operation of the machine. If the candidate has the ability he can also write some elementary programs, compile and run these through.
General office work - typing, keypunching, duplicating and assisting with the computer operation. The proportion of each will depend upon the candidates' background and interest.
Assist in a research project tc develop a retrieval base concerning computer and data processing information. The job would specifically involve scanning books, films, slides and other material, then keywording and abstracting the material on a designated form. The candidate would have to have good reading and comprehension ability.

18. Mr. G. Hartsell - Microfilming and filing of student records.

Faculty of Engineering Science

19. Dr. M. Bourgougnou - Study of fluidized bed entrainment in our column (2 ft. diameter, 33 ft. high). The electronic probe recently developed for isokinetic sampling will be used to find gas and solids fluxes at each point above a fluidized bed.
Study of a fluidized bed with mixed solids. Solids of different densities and particle sizes will be fluidized in a thin bed (3 ft. long, 1 inch wide, 20 ft. high). Bubbles will be tracked by a movie camera.

Business School

20. Under the direction of the Working Supervisor of the Printing Department, the Printing Technician will, through a training program, operate expensive printing production equipment necessary for finishing operations; perform manual printing production operations; maintain quality

Business School (cont'd)

20. control standards; carry out a program of daily maintenance, and perform related duties as required.

Department of Pharmacology

21. C.W. Gowdey - Preparation of charts and audiovisual aids for teaching laboratories. This would involve training in the use of stencilling apparatus and in photographic techniques. There will be an opportunity to develop and read results of experiments recorded on 35 mm. film.

22. C.W. Gowdey - Preparation of stock solutions of drugs - chemicals used in laboratory - assisting in surgical procedures with experimental animals - performing blood-cell counts - carrying out simple laboratory techniques - assisting in cleaning and maintenance of laboratory glassware, equipment and surgical instruments - (all of the above following appropriate instruction).

23. C.W. Gowdey - We are presently examining the biological properties of some new drugs which we have prepared. To further "process" these chemicals we need to be able to correlate the biological activities to their chemical re-activities. The opportunities exist, therefore, for a student to work in this area. It will involve a number of volumetric titrations and the plotting of graphs. The student will be taught the importance of pH in biology and chemistry and will have the chance to participate in other, more biological experiments.

Department of Physical Education

24. Dr. D.A. Cunningham - Measurement of body density in young children and effect on underwater body weight by hydrostatic weighing.

Department of Anthropology

25. Dr. D. Guemple - Helping to catalog University collections. For a male or female with some clerical skills - typing, good handwriting, and a willingness and patience to pour over large aggregations of things, to describe them, number them, and so on. Work will be

Department of Anthropology (Cont'd)

25. supervised by one graduate student and will be done in collaboration with another undergraduate student - so there is some team work involved.

26. Dr. D. Guemple - Working on the University's library collection of Anthropological materials. For a male or female with patience, good handwriting and/or typing skills to transfer bibliographical items from annotated bibliographies to order slips to be sent to the library for ordering, and to check to be sure that these items are not presently in the library or on order. Person would be supervised by Dr. Guemple or by Dept. secretary but would have to work alone for the most part.

Department of Political Science

27. Dr. T. Harvey - Library research and possibly computer related research into Canadian political attitudesand behaviour.

Department of Sociology

28. Dr. C. Grindstaff - Coding of data and bibliographic research on immigration into Canada in the 1960's.

Department of Psychology

29. Dr. D. Baran - Assistant on research in animal behavior.